

REMARKS

The Office Action mailed October 18, 2005 has been carefully considered. Within the Office Action Claims 1-45 have been rejected. The Applicant has amended Claims 1, 15, 26, and 37 and has cancelled Claims 33-36. In addition, the Applicant has added new Claim 46. Reconsideration in view of the following remarks is respectfully requested.

Information Disclosure Statement

The Applicant had previously filed an Information Disclosure Statement (IDS) with the USPTO on June 21, 2004. However, it does not appear that in the present Office Action that the references cited in the IDS were considered. The Applicant has included hard copies of each foreign and non-patent reference for the Examiner. The Applicant hereby requests acknowledgement of the IDS filed June 21, 2004. A copy of the previously filed IDS is submitted herein along with the present Reply.

Rejection under U.S.C. § 102

Claims 1-22 and 24-45 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,959,613 to Rosenberg et al. (hereinafter Rosenberg 1). The Applicant respectfully traverses.

Rosenberg 1 teaches a method and apparatus for shaping force signals for a force feedback device. A source wave is provided and is defined by a set of control parameters and modified by a set of impulse parameters with an impulse magnitude and a settle time. The settle time is represented as the time required for the impulse magnitude to change to the steady-state magnitude. Using a host processor or a local processor, the force signal is formed from the source wave and the sets of control parameters and impulse parameters. A feel sensation is generated to

a user of the force feedback device as physical forces produced by actuators on the force feedback device in response to the force signal. However, Rosenberg 1 does not teach a predetermined time based force component which is applied to a position based force component when the feedback device is sensed to be at a particular position. Instead, Rosenberg 1 states that effects, or overlays, are correlated with discrete events (e.g. jolt of a missile hitting a plane).

In contrast, Claim 1 recites, among other things, an actuator configured to apply a position-based force component to the manipulandum based on the position signal, wherein a predetermined time-based force component is applied to the position based force component to generate a haptic effect when the position signal is associated with a threshold position. Rosenberg 1 does not teach a time based force component applied to the position based force component when the manipulandum is sensed at a threshold position. For at least these reasons, Claim 1 is distinguishable over Rosenberg 1 and is in a condition for allowance.

Claim 15 recites, among other things, producing a position-based force applied to the manipulandum, the position-based force associated with the position signal when the manipulandum is moved and altering the position-based force by incorporating a predetermined time-based force when the manipulandum reaches the second position. Rosenberg 1 does not teach producing a position based force to the manipulandum and altering the position based force with a time-based force when the manipulandum reaches a second position. For at least these reasons, Claim 15 is distinguishable over Rosenberg 1 and is in a condition for allowance.

Claim 26 recites, among other things, a biasing element configured to apply a bias force to the manipulandum toward the first position; a sensor configured to output a position signal when the manipulandum is moved from the first position; and an actuator configured to output a haptic feedback sensation having a predetermined time-based component applied to the bias force when the position signal represents the manipulandum at the second position. In contrast,

Rosenberg 1 does not disclose a biasing element which provides a bias force to which a predetermined time-based force component is applied when the manipulandum is sensed in the second position. For at least these reasons, Claim 26 is distinguishable over Rosenberg 1 and is in a condition for allowance.

Claim 37 recites, among other things, outputting a first haptic feedback in response to the manipulandum being between the first and second positions, wherein the first haptic feedback has a position-based component; and outputting a second haptic feedback in response to the manipulandum being disposed in the second position, wherein the second haptic feedback includes the position-based component and a predetermined time-based component. In contrast, Rosenberg 1 does not disclose outputting a first haptic feedback which has a position based component between the first and second positions and outputting a second haptic feedback which has the position based component with a predetermined time-based component at the second position. For at least these reasons, Claim 37 is distinguishable over Rosenberg 1 and is in a condition for allowance.

Claims 2-14 are dependent on Independent Claim 1; Claims 16-22 and 24-25 are dependent on Independent Claim 15; Claims 27-31 are dependent on Independent Claim 26; and Claims 38-45 are dependent on Independent Claim 37. As stated above, Claims 1, 15, 26, 32 and 37 are allowable over Rosenberg 1. Accordingly, Claims 2-14, 16-22, 24-25, 27-31, and 38-45 are allowable for being dependent on allowable base claims.

Rejection under 35 U.S.C. § 103

Claim 23 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Rosenberg 1 in view of U.S. Patent No. 6,243,078 to Rosenberg (hereinafter Rosenberg 2). This rejection is respectfully traversed. However, Claim 23 is dependent on Independent Claim 15. As stated above, Claim 15 is allowable over Rosenberg 1. Accordingly, Claim 23 is allowable for being dependent on an allowable base claim.

New Claim

The Applicant has added new Independent Claim 46 which is allowable over Rosenberg 1 and 2, individually or in combination. Independent Claim 46 is fully supported by the specification and does not contain any new matter.

Conclusion

It is believed that this Reply places the above-identified patent application into condition for allowance. Early favorable consideration of this Reply is earnestly solicited. If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Please charge any additional required fee or credit any overpayment not otherwise paid or credited to our deposit account No. 50-1698.

Respectfully submitted,

THELEN REID & PRIEST, LLP

Dated: _____

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Suvashis Bhattacharya
Reg. No. 46,554

Thelen Reid & Priest LLP
P.O. Box 640640
San Jose, CA 95164-0640
Tel. (408) 292-5800
Fax. (408) 287-8040